ORDER NO. BSD0111M910
D12

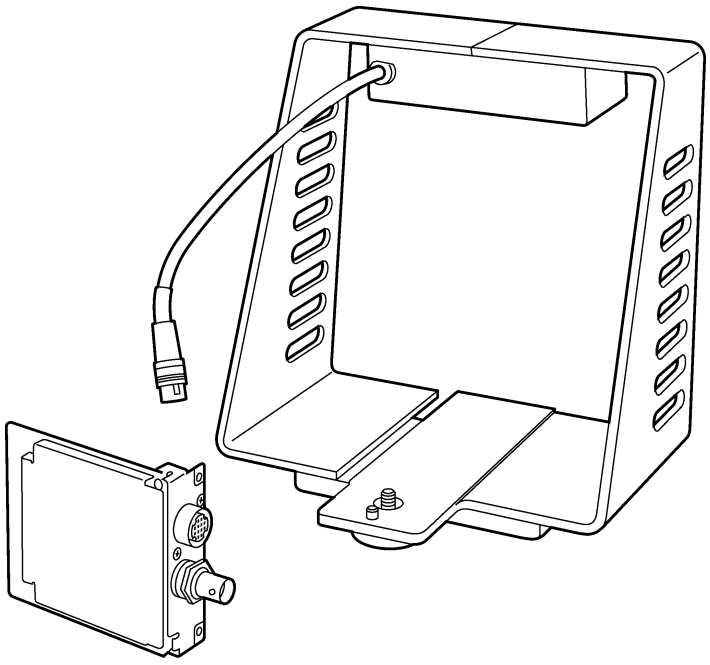
Service Manual

Sec. 1 *Schematic Diagrams*
Sec. 2 *Circuit Board Diagrams*
Sec. 3 *Exploded Views & Replacement Parts List*

Studio SDI Card

AW-PB306P/E

This product consists of an SDI card and an interface bracket.



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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

AW-PB306P

Specifications

Power requirements:
DC 12V (supplied from convertible camera)
Power consumption:
15.6 W

Allowable operating temperature:
32°F to 104°F (0°C to 40°C)
Allowable operating humidity:
30% to 90% (without condensation)
Dimensions (W×H×D):
SDI card
7/8″×2 13/16″×4 3/8″ (21.5×70×111 mm)
Interface bracket
7 1/2″×7 1/4″×6 3/4″ (190×183×171 mm)
Weight:
SDI card
0.242 lb (0.11 kg)
Interface bracket
2.112 lb (0.96 kg)
I/O connectors:
SDI card
SDI OUT connector:
BNC; compliant with SMPTE259M standard
EVF I/F connector:
12-pin; round
Interface bracket
EVF connector:
12-pin; round; composite signals/brightness signals; 1.0 V [P-P]
Inter-communications jack:
plug type: 1/8″ (3.5 mm)
Switch/control functions:
Interface bracket
EVF standby switch (STANDBY/ON)
Inter-communications level control
Menu screen
Zebra Indicator (ON/OFF)
Zebra 1 Level (70% to 109%)
Zebra 2 Level (71% to 110%)
Safety Zone (1/2/3/4/5/OFF)
EVF Output (Y/CVBS)

■ Accessorie

Adjuster plug
1/4″ ➧ 1/8″ (6.35 mm ➧ 3.5 mm) 1
Screws (6 mm in length) 2
Screws (8 mm in length) 4

Weight and dimensions indicated are approximate.
Specifications are subject to change without notice.

Specifications

Power requirements:
DC 12V (supplied from convertible camera)
Power consumption:
15.6 W

Allowable operating temperature:
0°C to 40°C
Allowable operating humidity:
30% to 90% (without condensation)
Dimensions (W×H×D):
SDI card
21.5×70×111 mm
Interface bracket
190×183×171 mm
Weight:
SDI card
0.11 kg
Interface bracket
0.96 kg
I/O connectors:
SDI card
SDI OUT connector:
BNC; compliant with SMPTE259M standard
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12-pin; round
Interface bracket
EVF connector:
12-pin; round; composite signals/brightness signals; 1.0 V [P-P]
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Zebra 2 Level (71% to 110%)
Safety Zone (1/2/3/4/5/OFF)
EVF Output (Y/CVBS)

■ Accessorie

Adjuster plug (6.35 mm ➧3.5 mm) 1
Screws (6 mm in length) 2
Screws (8 mm in length) 4

Weight and dimensions indicated are approximate.
Specifications are subject to change without notice.

SAFETY PRECAUTIONS

GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been over-heated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohm meter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. The resistance value must be more than 5MΩ.

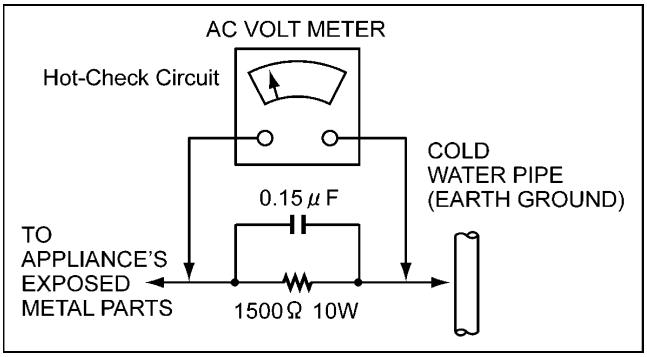

Figure1

LEAKAGE CURRENT HOT CHECK (See Figure 1)

1. Plug the AC cord directly into the AC outlet.
   Do not use an isolation transformer for this check.
2. Connect a 1.5KΩ, 10W resistor, in parallel with a 0.15μ F capacitor, between each exposed metallic part on the set an a good earth ground such as a water pipe, as shown in Figure1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet repeat each of the above measurements.
6. The potential at any point should not exceed 0.15 volts RMS. A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks, leakage current must not exceed 0.1 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically sensitive (ED) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground.
   Alternatively, obtain and wear a commercially available discharging wrist trap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as alminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it.
   (most replacement ES devices are package with leads electrically shorted together by conductive foam, alminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise hamless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device).

X-RADIATION

WARNING

1. The potential source of X-radiation in EVF sets is the High Voltage section and the picture tube.
2. When using a picture tube test jig for service, ensure that jig is capable of handling 10kV without causing X-Radiation.

Note : It is important to use an accurate periodically calibrated high voltage meter.

3. Measure the High Voltage. The meter (electric type) reading should indicate 2.5kV,±0.15kV. If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure. To prevent an X-Radiation possibility, it is essential to use the specified picture tube.

AW-PB306P

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER TO SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (service) instructions in the literature accompanying the appliance.

WARNING:
TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION:
TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.

CAUTION:
TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, REFER MOUNTING OF THE OPTIONAL INTERFACE BOARD T QUALIFIED SERVICE PERSONNEL.

FCC Note:
This device complies with Part 15 of the FCC Rules. To assure continued compliance follow the attached installation instructions and do not make any unauthorized modifications.

This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

For CANADA
This Class A digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la class A est conforme à la norme NMB-003 du Canada.

▭ indicates safety information.

AW-PB306E

■ **DO NOT REMOVE PANEL COVER BY UNSCREWING.**
To reduce the risk of electric shock, do not remove cover. No user serviceable parts inside.
Refer servicing to qualified service personnel.

WARNING:
TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, KEEP THIS EQUIPMENT AWAY FROM ALL LIQUIDS-USE AND STORE ONLY IN LOCATIONS WHICH ARE NOT EXPOSED TO THE RISK OF DRIPPING OR SPLASHING LIQUIDS, AND DO NOT PLACE ANY LIQUID CONTAINERS ON TOP OF THE EQUIPMENT.

CAUTION:
TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.

CAUTION:
TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, REFER MOUNTING OF THE OPTIONAL INTERFACE BOARD TO AUTHORIZED SERVICE PERSONNEL.

▭ indicates safety information.

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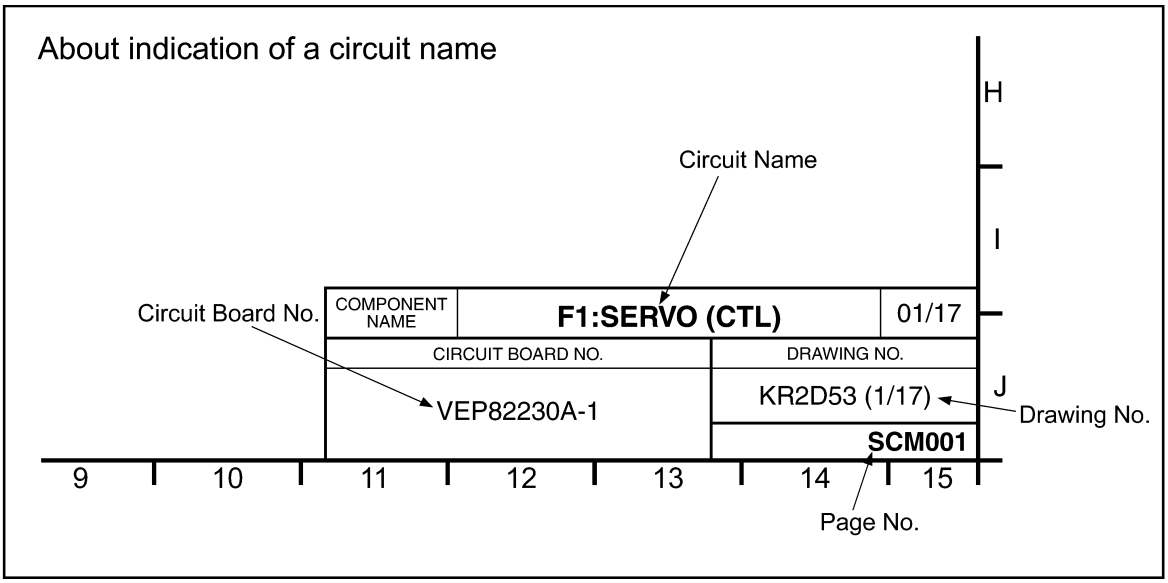
FCD0111NYNWL100

SECTION 1

SCHEMATIC DIAGRAMS



NOTE:
BE SURE TO MAKE YOUR ORDERS OF REPLACEMENT PARTS ACCORDING TO PARTS LIST, SECTION 3

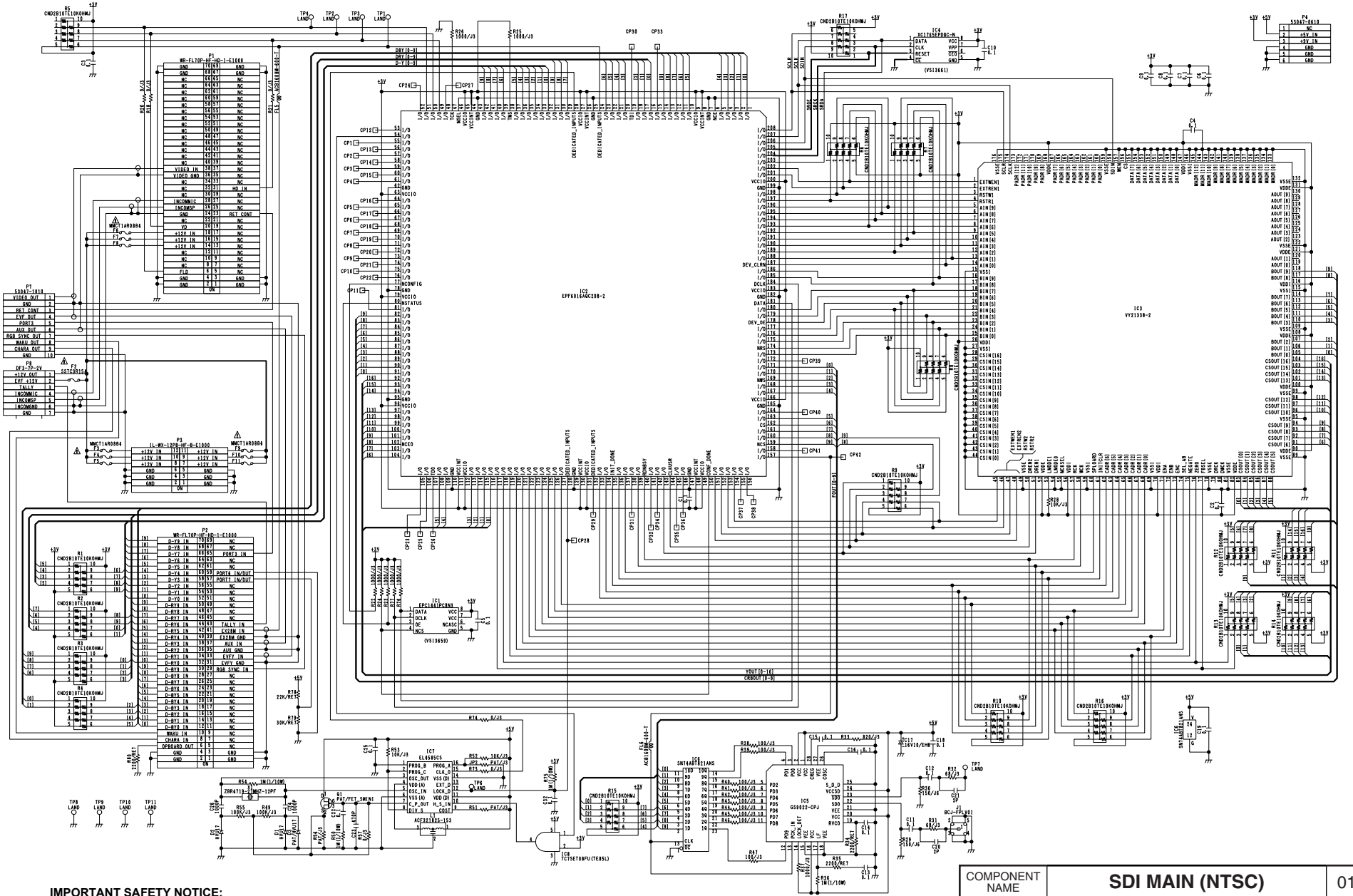
CAUTION

THE ▭ MARK INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

CONTENTS

SDI MAIN (NTSC)..... SCM001
SDI MAIN (PAL)..... SCM001
SDI SUB SCM002
ST-INT SCM003



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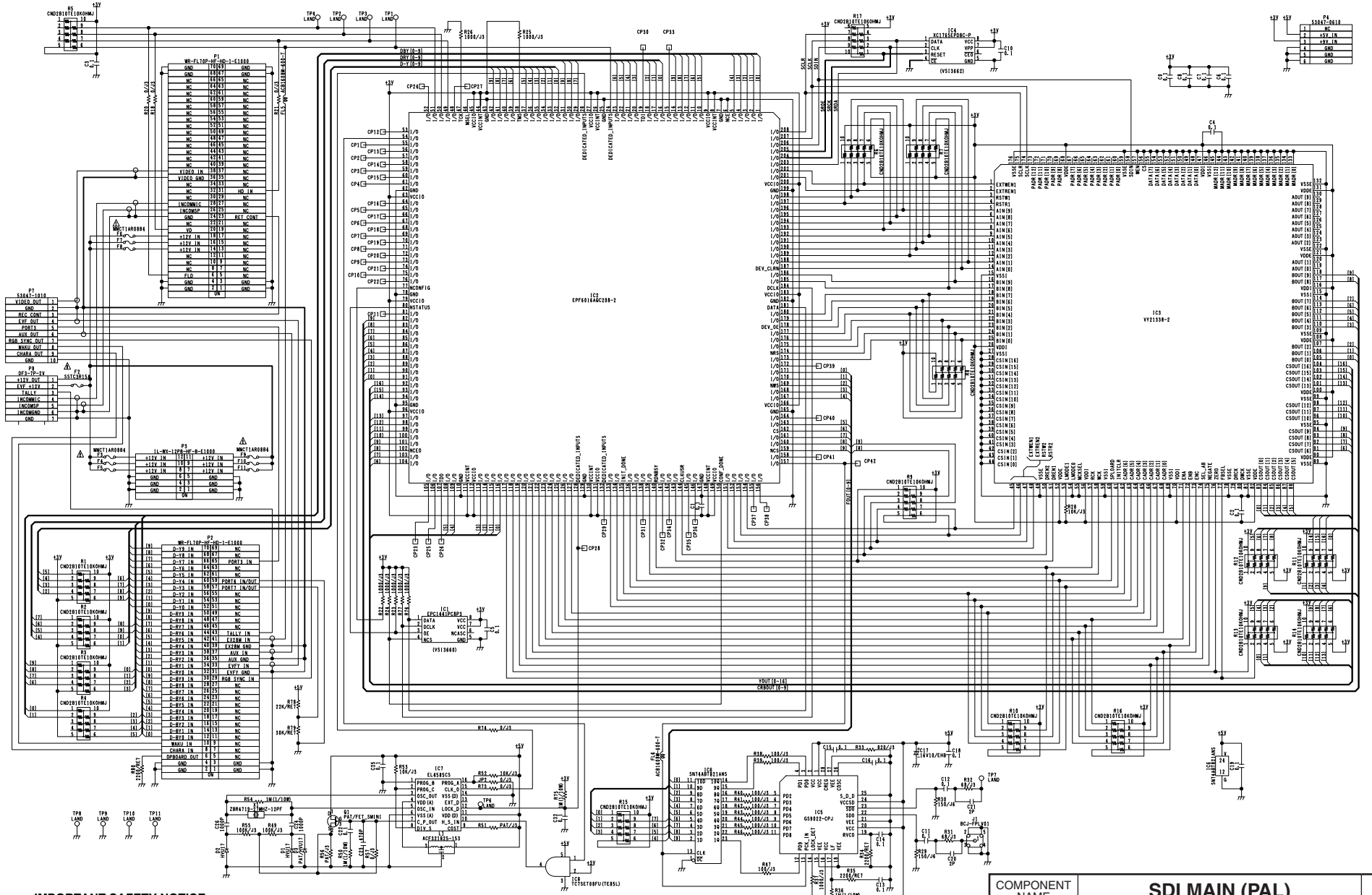
⚠ 警告

⚠ 印の部品は安全上重要な部品です。
交換するときは、安全及び性能維持のため必ず指定の部品をご使用ください。

COMPONENT NAME	SDI MAIN (NTSC)	01/01
CIRCUIT BOARD NO.		DRAWING NO.
VEP20891A		KR9H69
		SCM001



IMPORTANT SAFETY NOTICE:
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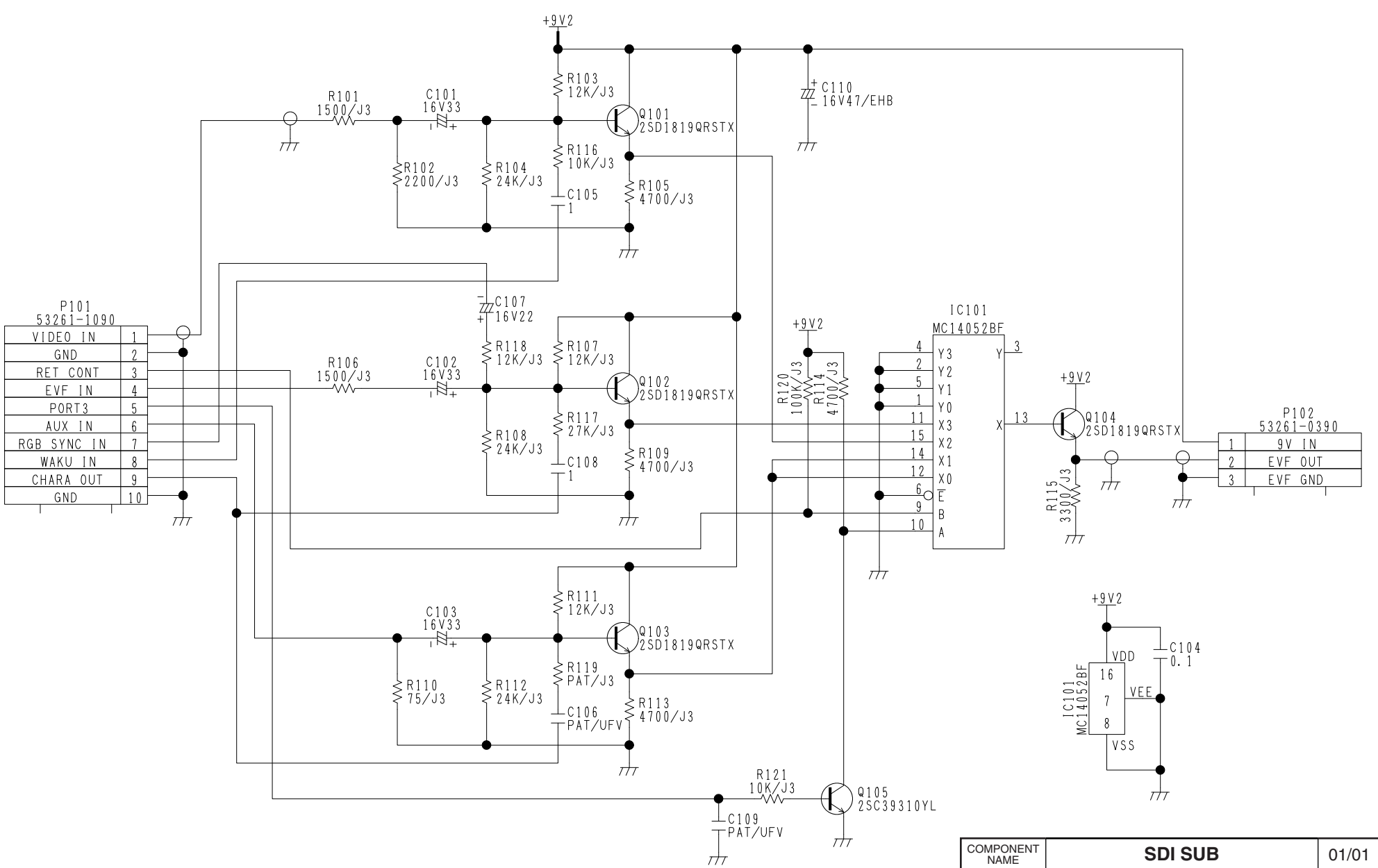
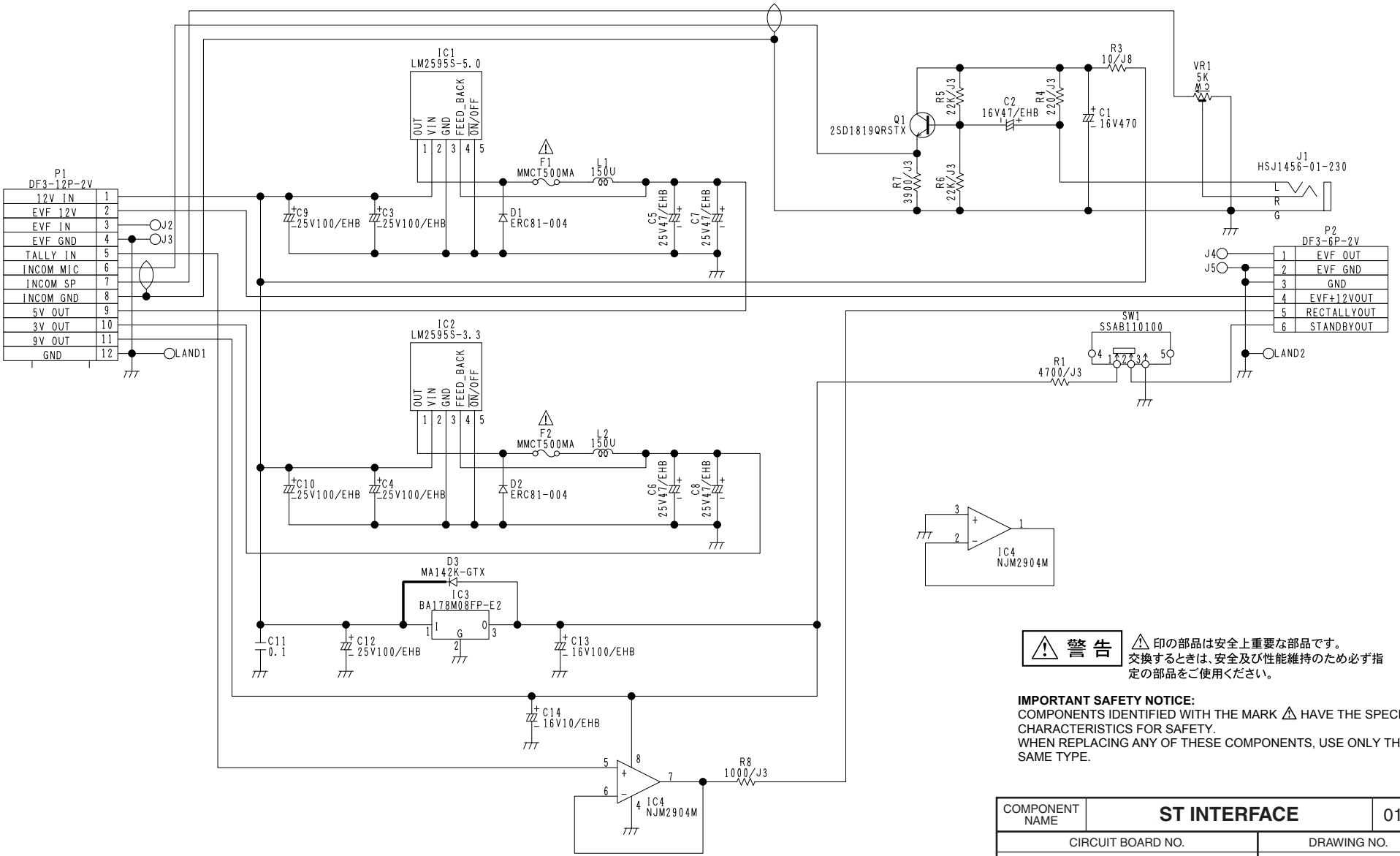
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

COMPONENT NAME	SDI MAIN (PAL)	01/01
CIRCUIT BOARD NO.		DRAWING NO.
VEP20891B		KR9H70
		SCM001



COMPONENT NAME	SDI SUB	01/01
CIRCUIT BOARD NO.		DRAWING NO.
VEP20892A		KR30183
		SCM002



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WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

COMPONENT NAME	ST INTERFACE	01/01
CIRCUIT BOARD NO.		DRAWING NO.
VEP20893A		KR1F23
		SCM003

A B C D E F G H I J

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

SECTION 2

CIRCUIT BOARD DIAGRAMS

NOTE:
BE SURE TO MAKE YOUR ORDERS OF REPLACEMENT PARTS ACCORDING TO PARTS LIST, SECTION 3

CAUTION

THE ▭ MARK INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

CONTENTS

SDI MAIN P.C.BOARD (NTSC) (VEP20891A) CBA-1
SDI MAIN P.C.BOARD (PAL) (VEP20891B) CBA-1
SDI SUB P.C.BOARD (VEP20892A) CBA-2
ST INTERFACE P.C.BOARD (VEP20893A)..... CBA-2

SDI MAIN P.C.BOARD (NTSC) (VEP20891A)
(PAL) (VEP20891B)

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
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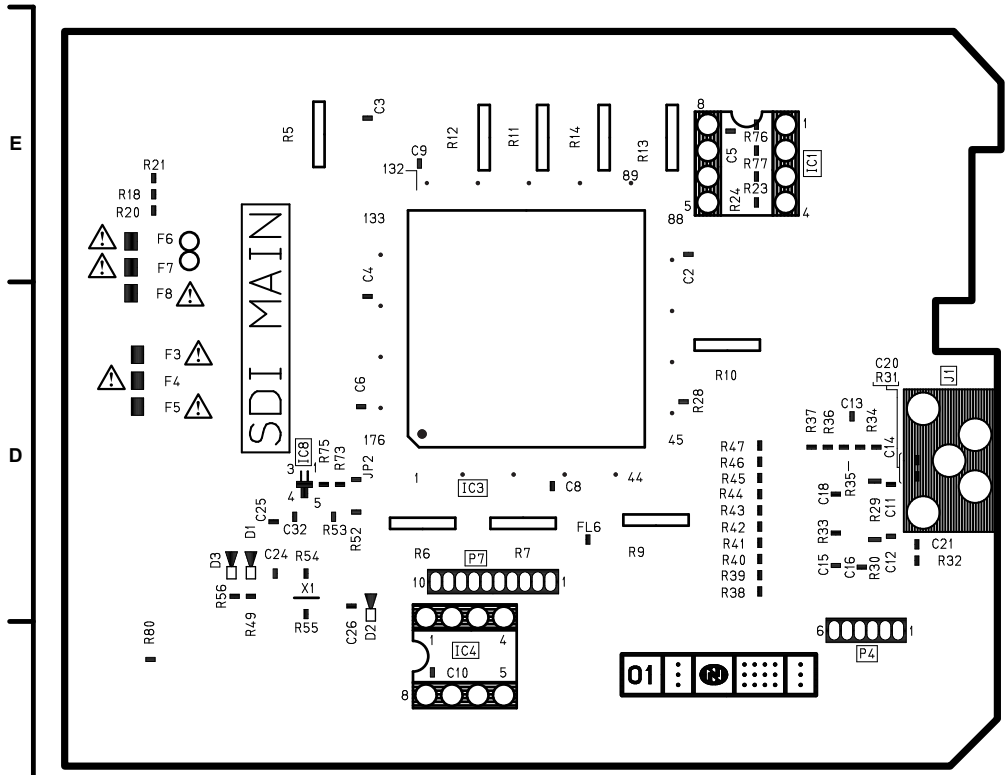
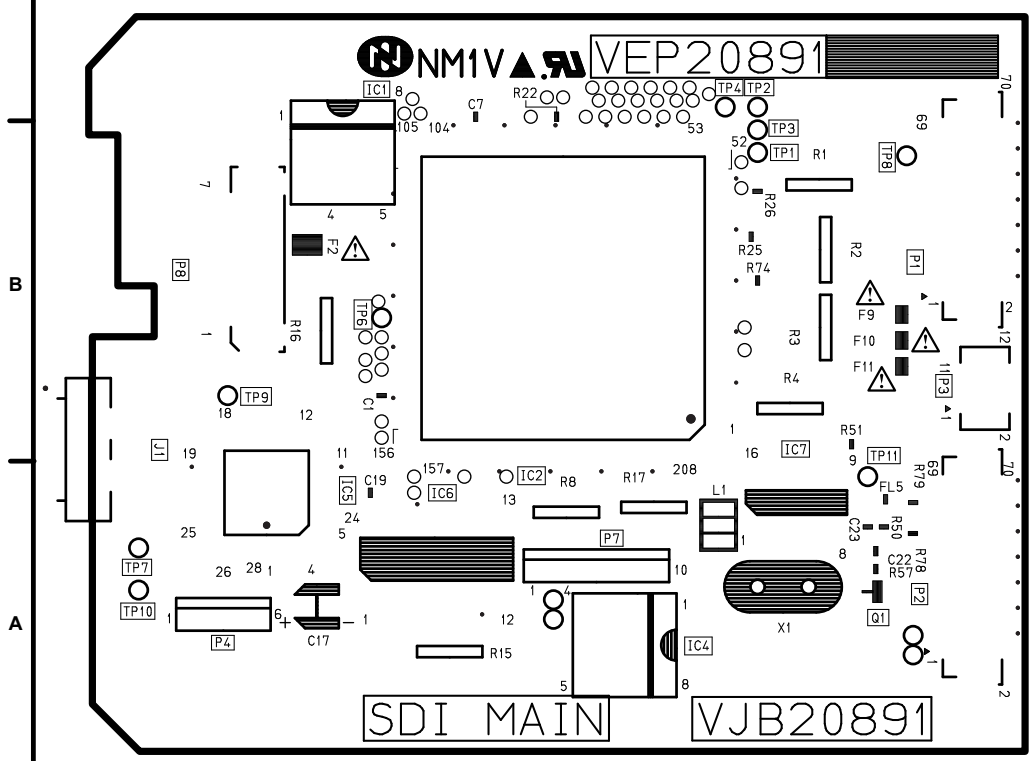


(FOIL SIDE)

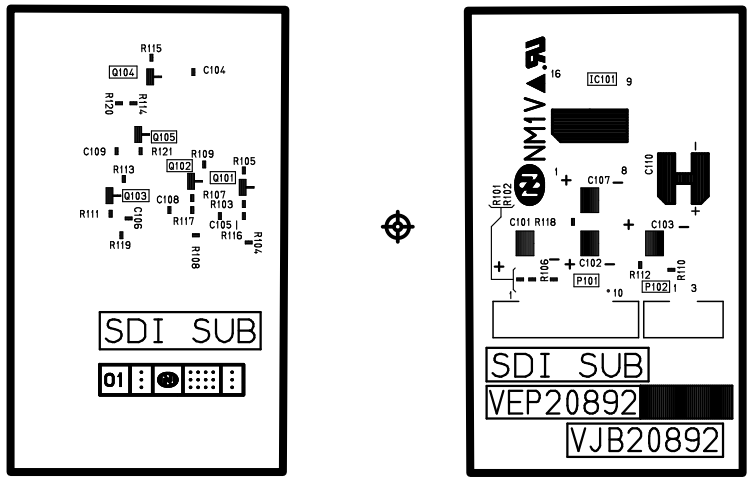
REF	LOC
IC1	E3
IC3	D2
IC4	C2
IC8	D1



(COMPONENT SIDE)

REF	LOC
IC1	B1
IC2	B2
IC4	A2
IC5	A1
IC6	A2
IC7	A3
Q1	A3
TP1	B3
TP2	C3
TP3	B3
TP4	C3
TP6	B2
TP7	A1
TP8	B3
TP9	B1
TP10	A1
TP11	A3

SDI SUB P.C.BOARD (VEP20892A)



(FOIL SIDE) (COMPONENT SIDE)

ST INTERFACE P.C.BOARD (VEP20893A)

IMPORTANT SAFETY NOTICE:
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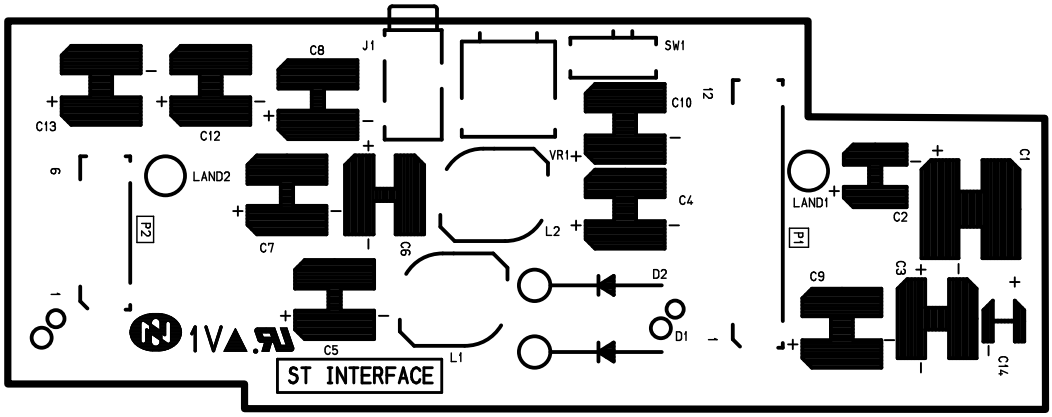
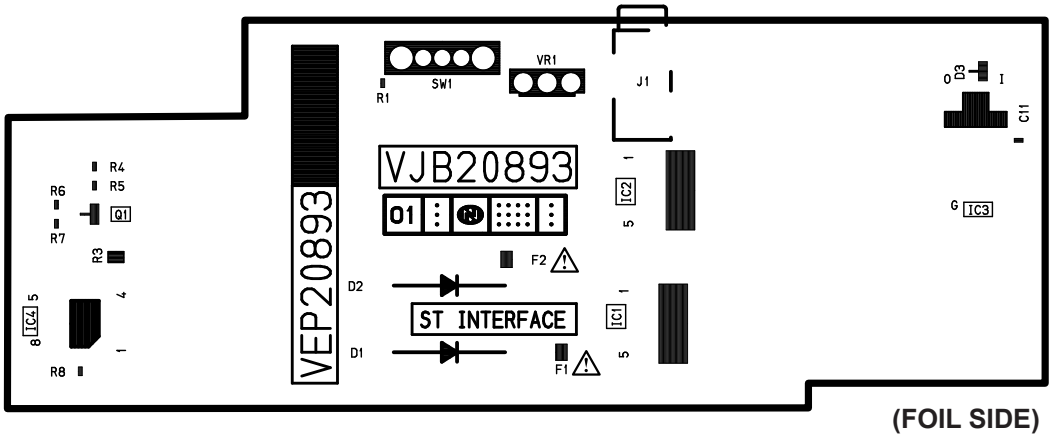


(COMPONENT SIDE)



(FOIL SIDE)

SECTION 3

EXPLODED VIEWS
&
REPLACEMENT PARTS LIST

Note:

1. *Be sure to make your orders of replacement parts according to this list.
2. Unless otherwise specified, all resistors are in OHMS, K=1,000 OHMS, all capacitors are in MICROFARADS (μF), P=μμF.
3. The P.C. Board untils marked with "■" shown below the main assembled parts.
4. The parts marked with Ⓔ on the exploded view show the electric parts.
5. IMPORTANT SAFETY NOTICE
   Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.
6. The marking (RTL) indicates the retention time is limited for this item.
   After the diacontinuation of this assembly in production, it will no longer be available.

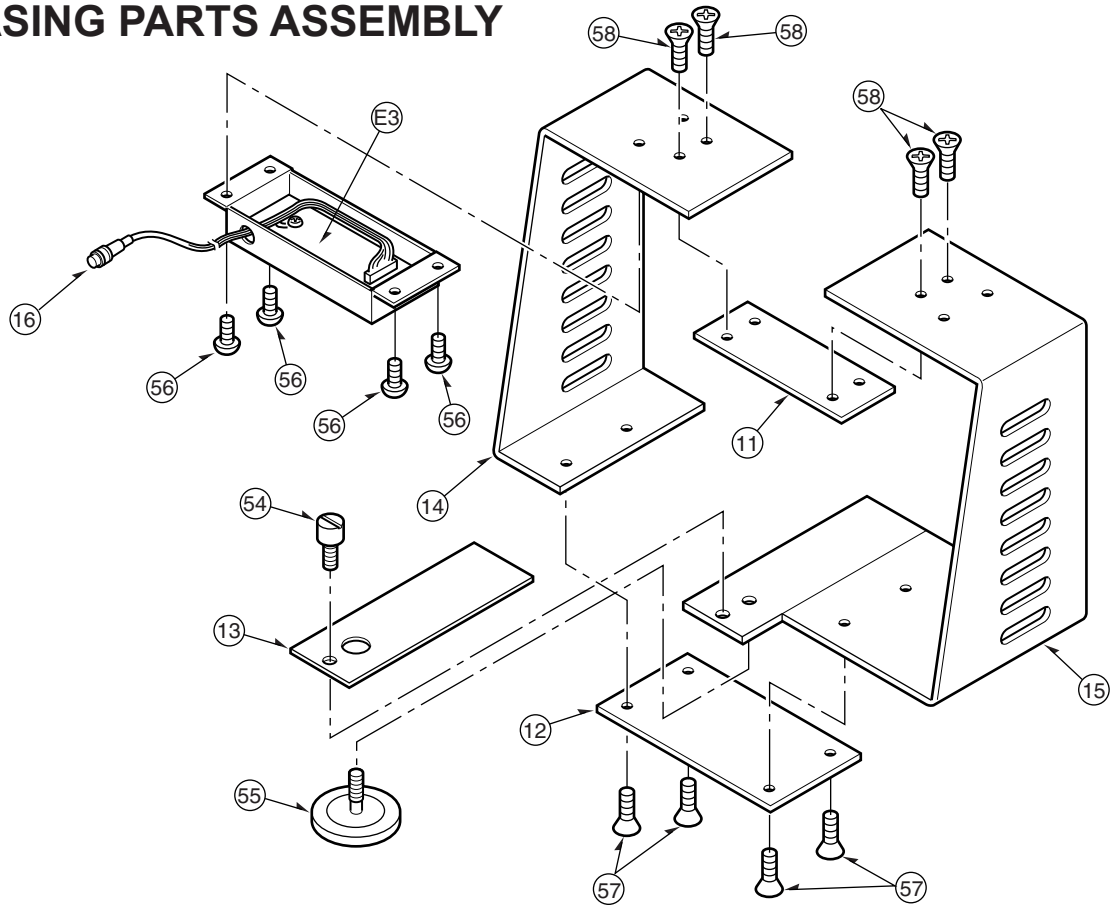
CONTENTS

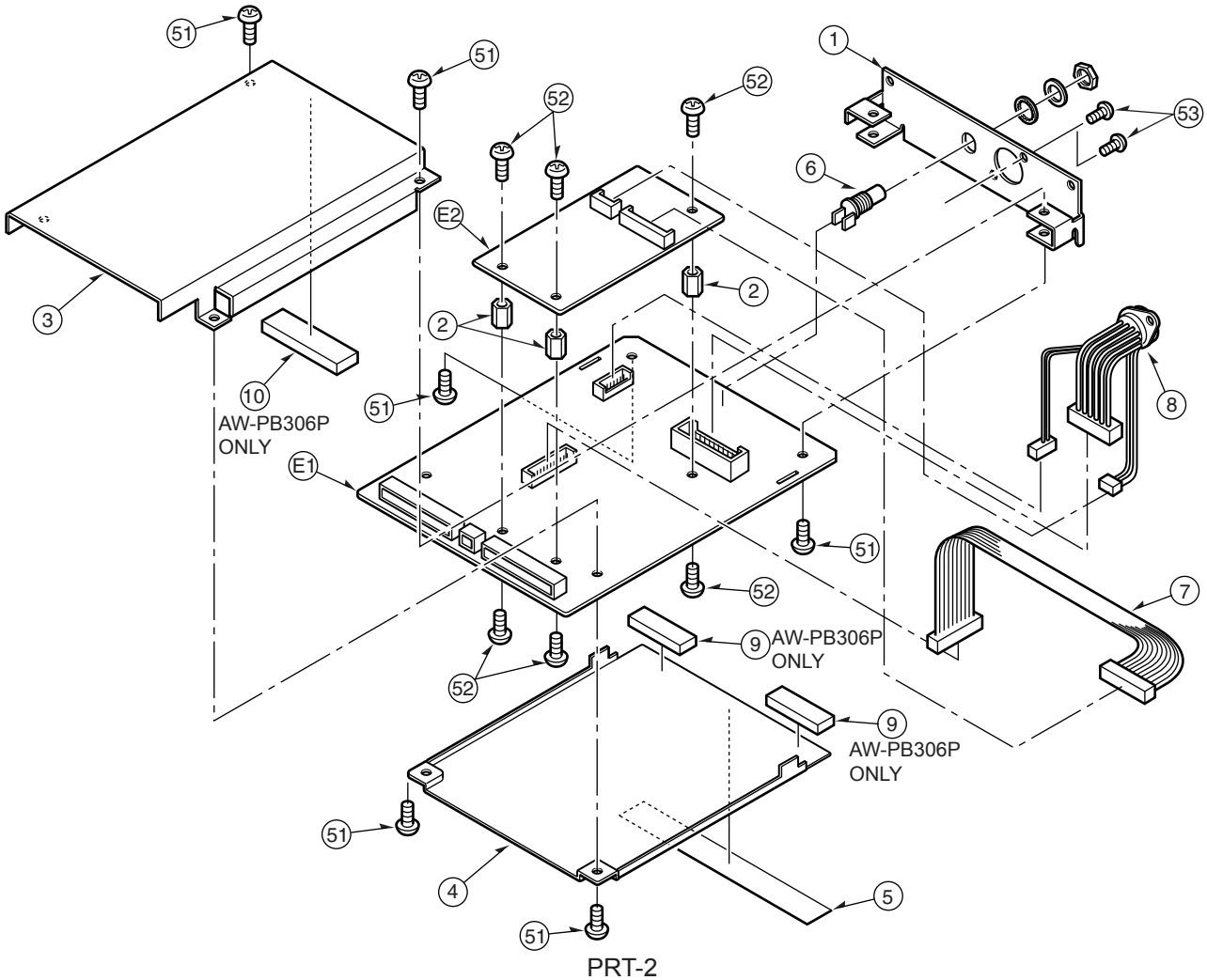
CASING PARTS ASSEMBLY PRT-2

PACKING PARTS ASSEMBLY PRT-4

ELECTRICAL REPLACEMNT PARTS LIST PRT-6

CASING PARTS ASSEMBLY





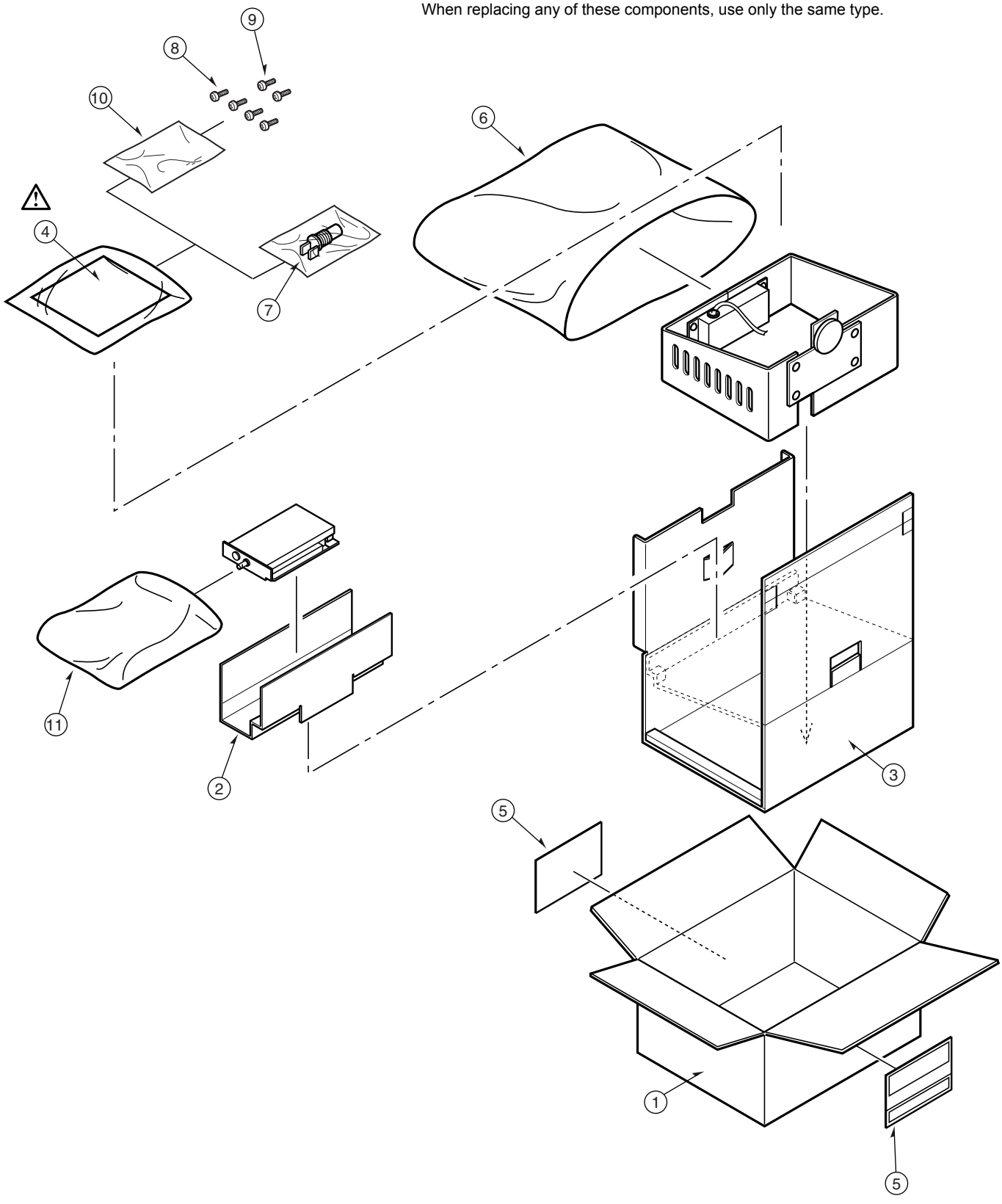
CASING PARTS ASSEMBLY

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VGP5524	SDI PANEL	1	
2	VMS7001	SPACER	3	
3	1C1A080A	SHIELD COVER A	1	
4	1C1A081A	SHIELD COVER B	1	
5	5H1A041A	INSULATION PLATE	1	
6	BCJ-FPLV01	CONNECTOR (FEMALE)	1	K1QBB1BB0003
7	VEE0R39	CONNECTOR CABLE 1	1	
8	VEE0R40	CONNECTOR CABLE 2	1	
9	VMT1267	GASKET	2	FOR AW-PB306P
10	VMT1268	GASKET B	1	FOR AW-PB306P
11	VMA0L19	SUPPORT PLATE	1	
12	VMA0L20	UNDER PLATE	1	
13	VMG1394	PROTECT SHEET	1	
14	VGP5566	ADAPTOR BASE (L)	1	
15	VGP5567	ADAPTOR BASE (R)	1	
16	DB-201N-639	CONNECTOR	1	
51	XSB26+4FN	SCREW	6	
52	XSN2+4	SCREW	6	
53	XSN26+6FN	SCREW	2	
54	VHD1439	SCREW	1	
55	YWV421EM01UA	SCREW	1	
56	XSB3+5FZ	SCREW	4	
57	XSS4+12FZ	SCREW	4	
58	XSS4+8FZ	SCREW	4	
E1	VEP20891B	MAIN P.C.BOARD	1	
E2	VEP20892A	SUB P.C.BOARD	1	
E3	VEP20893B	I/F P.C.BOARD	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks

PACKING PARTS ASSEMBLY

Components identified with the mark ⚠ have the special characteristics for safety.
When replacing any of these components, use only the same type.



PACKING PARTS ASSEMBLY

Components identified with the mark ⚠ have the special characterisitics for safety.
When replacing any of these components, use onlly the same type.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VPG0K90	PACKING CASE	1	
2	VPN5578	CUSHION	1	
3	VPN5579	CUSHION	1	
⚠ 4	VQT9295	OPERATING INSTRUCTIONS	1	FOR AW-PB306P
⚠ 4	VQT9296	OPERATING INSTRUCTIONS	1	FOR AW-PB306E
5	VQL9823	PACKING LABEL	2	FOR AW-PB306P
5	VQL0A25	PACKING LABEL	2	FOR AW-PB306E
6	PE35X50C05B	POLYETHYLENE BAG	1	
7	K2YZ01000033	SPECIAL JACK	1	
8	XSN26+8FN	SCREW	4	
9	XSN26+6FN	SCREW	2	
10	YWT050803	POLYETHYLENE BAG	1	
11	SKY10X20	POLYETHYLENE BAG	1	

ELECTRICAL REPLACEMNT PARTS LIST

Components identified with the mark ⚠ have the special characterisitics for safety.
When replacing any of these components, use onlly the same type.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E1	VEP20891A	MAIN P.C.BOARD	1	(RTL)FOR AW-PB306P
■ E1	VEP20891B	MAIN P.C.BOARD	1	(RTL)FOR AW-PB306E
■ E2	VEP20892A	SUB P.C.BOARD	1	(RTL)
■ E3	VEP20893A	I/F P.C.BOARD	1	(RTL)FOR AW-PB306P
■ E3	VEP20893B	I/F P.C.BOARD	1	(RTL)FOR AW-PB306E
■ E1	VEP20891A	MAIN P.C.BOARD	1	(RTL)FOR AW-PB306P
■ E1	VEP20891B	MAIN P.C.BOARD	1	(RTL)FOR AW-PB306E
C1-16	YGM1F104Z1ET	C.CAPACITOR CH 25V 0.1U	16	F1H1E104A016
C17	EEVHB1C100	E.CAPACITOR 16V 10U	1	
C18,19	YGM1F104Z1ET	C.CAPACITOR CH 25V 0.1U	2	F1H1E104A016
C20,21	YGM1C020C1HT	C.CAPACITOR CH 50V 2P	2	F1H1H2R0A260
C22	YGM1F104Z1ET	C.CAPACITOR CH 25V 0.1U	1	F1H1E104A016
C23	F1H1H4710003	C.CAPACITOR CH 50V 470P	1	
C24	YGM1C102J1ET	C.CAPACITOR 16V 1000P	1	F1H1E1020002
C25	YGM1F104Z1ET	C.CAPACITOR CH 25V 0.1U	1	F1H1E104A016
C26	YGM1C102J1ET	C.CAPACITOR 16V 1000P	1	F1H1E1020002
C32	YGM1F104Z1ET	C.CAPACITOR CH 25V 0.1U	1	F1H1E104A016
D1,D2	B0CCAB000005	DIODE	2	
F2	FGBR00013	SPECIAL FUSE	1	K5D312AZ0001
⚠ F3-11	K5H102300002	FUSE	9	
FL5,L6	J0JBC0000005	FILTER	2	
IC1	VSI3659	IC	1	FOR VEP20891A
IC1	VSI3660	IC	1	FOR VEP20891B
IC2	C1ZBZ0001603	IC	1	
IC3	VY21338	IC	1	
IC4	VSI3661	IC	1	FOR VEP20891A
IC4	VSI3662	IC	1	FOR VEP20891B
IC5	GS9022-CPJ	IC	1	C1AB00000384
IC6	C0JBBZ000260	IC	1	
IC7	EL4585CS	IC	1	C1AB00001498
IC8	C0JBAA000115	IC	1	
JP2	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP20891B
L1	J0HAAC000008	FILTER	1	
P1,P2	K1MR70B00001	CONNECTOR	2	
P3	K1KA12B00002	CONNECTOR	1	
P4	K1KA06A00079	CONNECTOR (MALE)	1	
P7	K1KA10A00067	CONNECTOR (MALE)	1	
P8	K1FA107A0002	CONNECTOR (MALE)	1	
R1-17	D1HA10380003	CONNECTOR (MALE)	17	
R18	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R20,21	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R22-26	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	5	
R28	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R29,30	ERJ6GEYG151	M.RESISTOR CH 1/10W 150	2	
R31,32	ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	2	
R33	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R34,35	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R36	ERJ3GEYF105	M.RESISTOR CH 1/16W 1M	1	
R37	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R38-47	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	10	
R49	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R50	ERJ3GEYF105	M.RESISTOR CH 1/16W 1M	1	
R52,53	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R54	ERJ3GEYF105	M.RESISTOR CH 1/16W 1M	1	
R55	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R57	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R73,74	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R75	ERJ3GEYF105	M.RESISTOR CH 1/16W 1M	1	
R76,77	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R78	ERJ3RBD223	M.RESISTOR CH 1/16W 22K	1	
R79	ERJ3RBD303	M.RESISTOR CH 1/16W 30K	1	
R80	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
X1	H0D270500009	CRYSTAL OSCILLATOR	1	
■ E2	VEP20892A	SUB P.C.BOARD	1	(RTL)
C101-03	SK41C336MC	T.CAPACITOR CH 16V 33U	3	
C104	YGM1F104Z1ET	C.CAPACITOR CH 25V 0.1U	1	F1H1E104A016
C105	YGM1F105Z1AT	C.CAPACITOR CH 10V 1U	1	
C107	SK31C226MRC	T.CAPACITOR CH 16V 22U	1	F3H1C2260004
C108	YGM1F105Z1AT	C.CAPACITOR CH 10V 1U	1	
C110	EEVHB1C470	E.CAPACITOR 16V 47U	1	
IC101	C0JBAR000242	IC	1	C0JBAR000021
P101	K1KA10A00072	CONNECTOR	1	
P102	K1KA03A00061	CONNECTOR (MALE)	1	
Q101-04	2SD1819QRS	TRANSISTOR	4	
Q105	2SC3931-C	TRANSISTOR	1	
R101	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R102	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R103	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R104	ERJ3GEYJ243	M.RESISTOR CH 1/16W 24K	1	
R105	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R106	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R107	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R108	ERJ3GEYJ243	M.RESISTOR CH 1/16W 24K	1	
R109	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R110	ERJ3GEYJ750	M.RESISTOR CH 1/16W 75	1	
R111	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R112	ERJ3GEYJ243	M.RESISTOR CH 1/16W 24K	1	
R113,14	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R115	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R116	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R117	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R118	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R120	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R121	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
■ E3	VEP20893A	I/F P.C.BOARD	1	(RTL)FOR AW-PB306P
■ E3	VEP20893B	I/F P.C.BOARD	1	(RTL)FOR AW-PB306E
C1	F2G1C4710002	E.CAPACITOR 16V 470U	1	
C2	EEVHB1C470	E.CAPACITOR 16V 47U	1	
C3,C4	EEVHB1E101P	E.CAPACITOR 25V 100U	2	
C5-C8	EEVHB1E470P	E.CAPACITOR 25V 47U	4	
C9,10	EEVHB1E101P	E.CAPACITOR 25V 100U	2	
C11	YGM1F104Z1ET	C.CAPACITOR CH 25V 0.1U	1	F1H1E104A016
C12	EEVHB1E101P	E.CAPACITOR 25V 100U	1	

Components identified with the mark ⚠ have the special characterisitics for safety.
When replacing any of these components, use onlly the same type.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C13	EEVHB1C101	E.CAPACITOR 25V 100U	1	
C14	EEVHB1C100	E.CAPACITOR 16V 10U	1	
D1,D2	ERC81004	DIODE	2	B0JANE000002
D3	MA142K	DIODE	1	
⚠ F1,F2	MMCT500MA	FUSE	2	K5H50300002
IC1	LM2595S-5.0	IC	1	C0DBAHG00009
IC2	LM2595S-3.3	IC	1	C0DBAGG00004
IC3	C0CBBFG00001	IC	1	
IC4	NJM2904M	IC	1	
J1	HSJ145601230	JACK	1	
L1,L2	A814AY-151K	COIL	2	G1C151K00003
P1	K1FA112D0001	CONNECTOR (MALE)	1	
P2	K1FA106D0001	CONNECTOR (MALE)	1	
Q1	2SD1819QRS	TRANSISTOR	1	
R1	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3	ERJ8GEYJ100	M.RESISTOR CH 1/8W 10	1	
R4	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R5,R6	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	2	
R7	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R8	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
SW1	K0D112B00006	SLIDE SW	1	
VR1	D2ACB5300001	V.RESISTOR 5K	1	
		MISCELLANEOUS		
	VKM5657	JUNCTION BOX	1	
	YWSR5N4	CORD CLAMP	1	
	XYN3+K6	SCREW	2	
	VJF1157	HARNESS	2	
	K1EA129D0006	CONNECTOR (MALE)	1	
	VMA0M91	ADHESION TAPE (A)	1	FOR VEP20893A
	VMA0M93	ADHESION TAPE (B)	1	FOR VEP20893A

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks